

CLASSIFICATION, THE MEASUREMENT OF PRODUCTION AND INTERNATIONAL TRADE IN SERVICES AND GATS.

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The paper makes the case that the business sector, economic and trade policy analysts, program planners and statisticians, will all benefit from the use of common international reference classifications, both for the collection of statistics about production and international trade in services and in the formulation of trade agreements. It mentions the standard international classifications, ISIC Rev.3, CPC v.1.0, and the BOP classification that are used in the compilation of services statistics and the advantages to be gained from using the services part of CPC v.1.0 in formulating national commitments for the upcoming GATS negotiations. Finally, after discussing some conceptual issues, it mentions the need for concerted and continued efforts to enhance and harmonize existing classifications for the two uses and the need for the coordinated effort of national and international statistical agencies to produce internationally comparable world-wide statistics on services production and international trade.

INTRODUCTION

Services now account for more than sixty percent of production in the economies of the advanced countries, and international trade in services is growing. Liberalization of trade in services is an important policy concern. The classification and measurement of domestic production and international trade in services is an important concern of statisticians and is closely linked to the collection and dissemination of service statistics that are important for private sector firms, policy analysts and trade negotiators, seeking to determine and develop market opportunities and to track industrial performance.

CLASSIFICATION

The use of international standard classifications to compile statistics makes it possible to compare data globally and across economies. Industry and product classifications provide the framework within which data about them can be collected, displayed and analyzed.

Compiled on the basis of their respective classifications, product and industry statistics provide an analytical framework to

- 1) analyze trends in production and international trade in service products; and
- 2) study the impact of changes in domestic or foreign markets for those service products, on the domestic economy, in terms of investment and employment in the industries that

¹The views expressed in this paper are those of the authors and do not necessarily reflect those of Statistics Canada or the Department of Foreign Affairs and International Trade.

produce them or with which they compete.

To be useful the categories of the classification have to be analytically relevant while at the same time being ones for which businesses keep records and can provide data.

International Classifications

International classifications are statistical standards developed and adopted by international agencies and recommended for use by national, regional and international statistical institutions. They are used directly or as reference classifications for grouping and organizing statistical information relating to a wide range of economic and social issues. The development and maintenance of individual classifications is the responsibility of various international organizations, including the United Nations.

The International Standard Industrial Classification, Revision 3 (ISIC Rev. 3) of the United Nations published in 1990 is the current standard classification of industries². Many countries and international agencies have begun to use it though some countries are still using ISIC Rev. 2³, the previous version of the classification. In keeping with the changing structure of many of the world's economies, the number of classes designed to display services, was doubled at all levels of ISIC Rev. 3, as compared to ISIC Rev. 2.

The Central Product Classification Version 1.0 (CPC v.1) is the international classification of all products, both goods and services, developed by the United Nations⁴. It was developed as a statistical reference classification for the collection of services product data relating to production, distribution and international trade of goods and services and published in 1998.

The Central Product Classification was first developed at the same time as ISIC Rev. 3. The development of an international classification of internationally traded goods started with the development of the Brussels Trade Nomenclature (BTN) for the collection of customs tariffs, immediately after the war. This was followed by the development of the Harmonized Commodity Description and Coding System (HS) by the World Customs Organization, which was internationally adopted in 1988. In parallel, the United Nations

²United Nations (1990). *International Standard Classification of All Economic Activities*, Statistical Papers, Series M No. 4, Rev.3, United Nations, New York.

³United Nations (1971). *International Standard Industrial Classification of All Economic Activities*, Statistical Papers, Series M No. 4, Rev.2, United Nations, New York.

⁴United Nations (1998). *Central Product Classification (CPC)*, Statistical Papers, Series M No. 77, Ver 1.0, United Nations, New York.

Statistical Office developed the Standard International Trade Classification (SITC) as a statistical classification for merchandise trade. However, no comparable international development occurred in the case of services. In developing the CPC, the goods part could be based on the well-established Harmonized System, that had been developed and continues to be maintained by the World Customs Organization, and related to SITC Rev 3. To develop the services part of the CPC, the United Nations Statistical Office (UNSO) requested the assistance of a group of statistical offices, who constituted themselves into the Voorburg Group on services statistics for the purpose. The UN Statistics Division (UNSO at the time) developed the CPC with the assistance of the members of the Voorburg Group and a group of experts, and presented it the UN Statistical Commission for approval. In approving the final draft of the Central Product Classification, in 1991, the Statistical Commission of the United Nations recommended that it be declared Provisional⁵ and that member states should make use of the classification in order to gain experience in obtaining international comparability for data classified according to goods and services. At the time, the services part of the classification was the only comprehensive international classification of services in existence.

Service negotiators in the Uruguay Round, requiring an international classification system for services, built upon the CPC Provisional in developing their Services Sectoral Classification List (see Appendix A).

Since its publication, some of the member statistical agencies of the Voorburg Group used and tested the Provisional CPC, reported on their experience and recommended improvements. Based on those recommendations, certain categories of the services part were revised. The goods part of the classification was rebased to the 1990 version of the Harmonized System. The Central Product Classification Version 1.0 (CPC v.1) was approved by the UN Statistical Commission and released by the United Nations Statistics Division in 1998. CPC v.1 replaced the Provisional CPC.

CPC and the Balance of Payments (BOP) Classification

The Balance of Payments Classification of International Services of the International Monetary Fund is used in most countries to collect and compile international trade in services data, for the Balance of Payments⁶. When, the classification was expanded for BPM 5, it utilized the Provisional CPC to disaggregate certain of the service categories of

⁵United Nations (1991). *Provisional Central Product Classification*, fifth edition, Statistical Papers, Series M No. 77, United Nations, New York.

⁶IMF (1993). *Balance of Payments Manual*, fifth edition, International Monetary Fund, Washington, D.C.

the classification and related others to it⁷.

An Interagency Task Force on Statistics of International Trade in Services, composed of UNSD, IMF, WTO, OECD and Eurostat are now in the process of further extending the Balance of Payments classification and linking it to CPC v.1, to enable countries to collect more detail if they wish, about international trade in services.

Services are produced and exported. Even though there are a few services for which there are differences between the conceptual approach of measuring domestic production and international trade for the Balance of Payments, because its purpose is to measure net - payments rather than production, the linking of the CPC and the BOP classifications provides a framework for linking domestic production and international trade statistics for service products.

CPC and the General Agreement in Trade in Services (GATS)

Members of the WTO are obliged to undertake commitments in the General Agreement in Trade in Services (GATS). These commitments are reflected in a legally binding document, namely, the Members' Schedule of Specific Commitments. The scheduling guidelines developed during the Uruguay Round indicate "Schedules record, for each sector, the legally enforceable commitments of each Member. It is therefore vital that schedules be clear, precise and based on a common format and terminology."⁸

Currently Members should base their schedules on the classification list developed by the Members and circulated as a Secretariat document during the Uruguay round negotiations. This document is entitled *Services Sectoral Classification List*, MTN.GNS/W/120 (see Annex A of this paper). This classification, informally referred to as W/120, is closely correlated with the Provisional CPC.

"The legal nature of a schedule as well as the need to evaluate commitments, require the greatest possible degree of clarity in the description of each sector or sub-sector scheduled. In general the classification of sectors and sub-sectors should be based on the Secretariat's revised *Services Sectoral Classification List* [MTN.GNS/W/120 dated 10 July 1991]. Each sector contained in the Secretariat list is identified by the corresponding Central Product Classification (CPC) number. Where it is necessary to refine further a sectoral classification, this should be done on the basis of the CPC or other internationally recognized classification (e.g. Financial Services Annex). The most recent breakdown of

⁷Ibid, Appendix III.

⁸*Scheduling of Initial Commitments in Trade in Services: Explanatory Note*, MTN.GNS/W/164, 3 September 1993, page 6.

the CPC, including explanatory notes for each sub-sector, is contained in the UN *Provisional Central Product Classification*.⁹

Members use the W/120 list for scheduling their commitments with only a few exceptions in certain specific service sectors. A large number of members (including Canada, the E.C. and most others) also further clarify their commitments using the UN Central Product Classification (CPC). A limited number of members, including the U.S., do not make reference to the CPC within their schedule of commitments.

Since the Uruguay Round the Provisional CPC has been revised and replaced by CPC v 1. The aim of the revision was mainly to concern itself with the detailed classes of the classification and to review and refine them, to make them suitable for the collection of data from businesses. However, minor changes were also made to higher levels of the classification to bring together in the structure, similar types of services rather than to leave them grouped in heterogeneous groups. Business services were the prime objective of the review as, at the time, those were the services of greatest interest to national statistical programs.

The revision sought to enhance the relevance of the classification by

- S creating classes for services that were becoming statistically significant or important
- S identifying important services that had not been separately identified in the Provisional CPC and creating classes for services for which no suitable class seemed to exist
- S unduplicating the very few cases of overlapping services that had occurred in the Provisional CPC.
- S reviewing the titles of the classes and making them more meaningful and succinct
- S changing the way the explanatory notes had been written for the Provisional CPC and creating itemized lists of examples.

Product classifications, particularly statistical ones that apply to production and international trade in services must remain flexible and cannot stay unchanged for too long a time in terms of content, wording or description. Text that is legally binding should contain the provision for updating referenced classification. The “freezing” of classification systems would be self-defeating. As time passed, the legally binding text would define objects(services) that have either ceased to exist or else are of limited significance. It would also omit or overlook new services that are in keeping with the spirit of the text, even though they were not specified at the time when it was drafted. This is why legal agreements should allow for the incorporation of renewed and revised classification

⁹Ibid.

systems as they are developed.¹⁰

For example, the General Agreement on Tariffs and Trade (GATT 1947) the precursor to the Uruguay Round of Trade Agreements, allowed for the incorporation of revisions to the Harmonized Commodity Description and Coding System (HS) for the classification of goods as they were developed.

While the GATS agreement refers to the Provisional CPC through the W/120 list, it should allow for the possibility of reference to CPC v.1, and subsequent revisions, as required.

Reference to CPC v 1 in the GATS would have several benefits:

a) it would add clarity to agreement by describing clearly those service sectors where countries have made commitments to liberalize. This would provide greater certainty to businesses trying to determine if their service firms are entitled to specific benefits under the GATS. It would also add greater legal certainty to Members schedules of commitments and facilitate the work of WTO panels in the event of a dispute dealing with trade in services.

Increasing the clarity of the GATS is important as the structure of the GATS agreement and the manner in which a Member's commitments are scheduled is not always easy to understand. It is sometimes difficult to know clearly what a Member has actually committed to liberalize. The fact that Members do not universally use further sectoral disaggregation provided by the CPC further limits the transparency of the agreement.

b) improvements to services classification could also lead to increased liberalization through greater sub-categorization of commitments. When Members in drafting their schedules of commitments apply not only the W/120 classification list but also the CPC, the number of service sub-sectors increases. Members are therefore able to more clearly describe those sectors which will be liberalized. However, if only W/120 is used, rather than specifying certain elements of a services category that will be liberalized (if the intent is not to liberalize the whole sector), Members may decide that they will not enter the sector into their schedule of commitments at all, to avoid possible legal challenges at a later date. On the other hand, if Members refer to the CPC classification, they are then able to clearly specify which sub-sectors of the larger classification are open for foreign service providers.

If a service sector or sub-sector is clearly described in the CPC and itemized in W/120 then Members are more easily able to include it as a sector for negotiation in the next services

¹⁰See Meeting of the World Trade Organization Committee on Specific Commitments
Statement of the United Nations Statistics Division : <http://www.un.org/depts/unds/class/meeting.html>

negotiation. By naming the sector its existence is acknowledged and by describing it, the scope for eventual liberalization is shaped.

c) To the extent that the statistical classification reflects commercial reality, the results for liberalization of the service sub-sectors becomes more commercially significant to the private sector. As the CPC is an evolving classification, it should provide for the systematic and consistent incorporation of “new” services and service sectors as they develop. Over time and through successive revisions, it will ever more closely mirror the commercial realities of those firms involved in producing and trading services.

d) Finally, improved classification and the use of the CPC would lead to a better correlation between international data on trade in services and WTO commitments. International data on trade in services is collected on the basis of commonly accepted classification systems. In the case of services this is normally based on the balance of payments manual developed by the International Monetary Fund (BMP5).

International services data are collected on the basis of the IMF Balance of Payments classification as shown in the Balance of Payments Manual 5th edition (BPM5). There is no direct correlation between the classification used to collect the BOP data and the GATS W/120 classification, however both classification systems can be related to the Provisional CPC. When the Balance of Payments Classification of the International Monetary Fund was expanded, it utilized the Provisional CPC to disaggregate certain of the service categories of the classification. To the extent that countries compile data for those categories, they correspond to the categories of the CPC. Others can be related to the CPC in broad terms. There are therefore some internationally available data on trade in services that can be referenced to the CPC at least at a broad level.

In the future, the work of the Interagency Task Force on Statistics of International Trade in Services, composed of UNSD, IMF, WTO, OECD and Eurostat, that is now in the process of further extending the Balance of Payments Classification and linking it to CPC v.1, will enable countries to collect more detail, if they wish, about international trade in services based on CPC v.1.

Business firms that intend to use services trade data to determine opportunities in the international market, will find their analysis easier if the GATS commitments reflect as far as possible categories also used in international trade in services data.

If Members do not use CPC v.1 when scheduling their GATS commitments, then this correspondence with internationally available data is lost.

Internationally comparable data on trade in services are also important for those Members who are interested in demonstrating injury - required for safeguard, subsidy, as well as in

determining compensation under GATS Article XXI procedures.

As certain service sectors gain in commercial importance as the result of technological developments and changes in the domestic and international patterns of trade, the benefits of liberalization in these sectors will become more apparent. If the sectors are not clearly identified in the W/120 list, then it may become more difficult to target these for specific liberalization. Use of the CPC allows for this identification to take place and to the extent that CPC v.1 is a refinement on CPC Provisional, certain service sub-sectors are more clearly identified and can therefore be the target for increased liberalization.

Ad hoc scheduling

Ad-hoc approaches to scheduling of commitments have been used by some Members in describing certain service sub-sectors in their schedules of commitments. There are however only four examples of sectors where the use of ad-hoc scheduling approaches as opposed to reference to the CPC was agreed to by WTO members. These are the air transport annex, the scheduling of commitments in the agreement on basic telecommunications, the financial services annex and the draft model schedule in maritime transport.

Members chose an ad-hoc scheduling approach in these four sectors because it was felt the Provisional CPC did not provide adequate detail or defined certain sectors in a manner that would have complicated negotiations (by including under certain headings sub-sectors that were targeted for liberalization with others that were not).

Some of these concerns may have been resolved with the development of CPC v.1 which provides further elaboration and greater detail for certain sectors.

To the extent that ad-hoc scheduling is maintained in these sectors or is considered in other sectors the link between GATS commitments and international services data is weakened. Efforts should be made to link ad-hoc scheduling approaches in these sectors with the CPC where possible and to discourage further ad-hoc scheduling approaches to the extent possible. Some Members may lobby for ad-hoc scheduling, arguing that it is required in order to reflect the "economic reality" of a certain service sector. An underlying objective of this argument may be to limit the application of the CPC to scheduling guidelines and maintain their Members' to schedule without the reference to the CPC.

Possible options for WTO Members

Improvements in classification can incrementally improve the transparency of the GATS agreement and promote further liberalization in certain emerging services sectors. The following section of the paper attempts to outline a possible approach that could be taken

by Members in the period leading up to the next round of services negotiations and during the round itself.

Next step for WTO members

Improvements in classification can incrementally improve the transparency of the GATS agreement and promote further liberalisation in certain emerging services sectors. The following section of the paper attempts to outline a possible approach that could be taken by Members in the period leading up to the next round of services negotiations and during the round itself. The main goal and objective of WTO Members in their efforts to improve the classification of services should be the revision of the Services Sectoral Classification List (MTN.GNS/W/120) and reference to CPC Version 1.0 in this list. Consensus seems to be emerging that complete conversion to CPC v.1 is unlikely and probably not possible in the short term. Members in the GATS Committee on Specific Commitments (CSC) are currently examining CPC v.1 in sectors suggested by Members in order to determine if it adds value to the classification of these sectors.

The goal of this exercise should be the creation of a revised W/120 list with the addition of certain key sectors with reference to CPC Provisional or Version 1 where appropriate. This list, which would be agreed to by WTO Members, would be used by Members in scheduling their commitments in the upcoming service negotiations.

In selecting sectors for examination by CSC, Members can consider two criteria, first, the sector should be one of commercial interest to services exporters and second, CPC v.1 should be an improvement over the Provisional CPC in classifying the sector. If CPC v.1 does not adequately describe the sector, then Members may suggest ad-hoc scheduling approaches for the sub-sector.

Where CPC v.1 provides improved classification, those sectors should be examined for eventual improvement in a revised W/120 list. All of the services universe is covered by CPC Version 1.0 even if not explicitly named, as was the case with the Provisional CPC. Though the CPC is not an exhaustive list of products, it is a comprehensive classification of service products.

Given the difficulty of identifying services transactions and creating an exhaustive list, and the fact that the Provisional CPC which forms the basis of many of the W/120 sectoral descriptions, was a similar classification that provided examples rather than an exhaustive list of products, the use of CPC v.1 provides a useful framework within which to undertake commitments.

Based on an initial analysis of CPC v.1 and the above criteria, the environmental, energy,

construction and distribution service sectors would appear to warrant consideration.¹¹

MEASURING PRODUCTION AND INTERNATIONAL TRADE IN SERVICES

Some conceptual and analytical issues that arise when measuring production and international trade relate to the distinction between products and industries and the identification of service products. There is also the issue of the feasibility of collecting the data required to statistically measure the four modes of supply described in GATS.

The distinction between products and industries.

To analyze markets and international trade, it is data about *products* that are of interest. What is required is information about the goods and services that are produced by businesses and sold in the domestic market and exported. Product classifications are designed to identify and group data relating to products.

Industry classifications group business units engaged in similar activities and those using similar skills, inputs and production processes, into *industries*. They are designed for the collection of production data about businesses, such as output, products produced and revenues earned, and the cost of associated inputs including materials and services purchased, wages and salaries and employment, and investment, depreciation and profits.

For purposes of measuring the activity of large and complex firms, the manner in which production is organized within the business is examined and producing units operating within the domestic economy are identified. These are units for which information on outputs and associated inputs can be assembled. Data related to whole businesses, particularly in the case of small firms, and the business units of complex firms, where they can be identified and separated, are grouped into *industries* for purposes of analyzing their performance and productivity.

¹¹Environmental Services - CPC v.1 more clearly identifies certain key environmental services such as treatment of hazardous waste.

Energy Sector- Use of CPC v.1 would allow for greater commitments with addition of new item- distribution of cold water and separation of hot water electricity and gas from incidental services.

Other business services -CPC v.1 appears to be more coherent than the provisional version.

Construction- conversion of Member's commitments to CPC v.1 would likely be relatively straight forward.
(Cont'd)

Distribution- CPC v.1 brings additional clarity to this important sector - e.g. motor vehicles reintegrated in distribution, separation of repair from distribution, retail outlets classified in terms of types of shops rather than type of goods.

Tourism- may promote additional commitments with disaggregation of travel agencies and tour operators services.

In order to know how much of a particular product is produced in an economy, it is necessary to assemble the information from all the industries that produce it. Industries produce numerous products, and the same products can be produced by a number of different industries. Often the main producing industry accounts for the majority of production of the product but this is not always the case. It depends on the product whose output is being measured and how narrowly the unit of production is defined. Examples of products that are produced by a number of industries are, the service of Project management of construction projects, which can be produced by the engineering industry, the architecture industry, and the construction industry and Advertising services that result in revenues from the sale of space or time to advertisers, that are produced by many industries including the publishing industry- the publishers of newspapers, periodicals and journals, the radio and TV industry, the advertising industry, retail trade and internet service providers.

Product data can be displayed in terms of the industries that produce them. The addition of imports provides an estimate of the total supply by product. The disposition of that product output can be analyzed in terms of those that are purchased by businesses for use in the production process, and as capital inputs, those that are purchased by consumers and by government, as well as exported. The current trend is for service products to account for a growing proportion of both outputs and of inputs. Purchased services now account for a larger proportion of industry inputs, as well as of consumption by final consumers. Services account for a growing proportion of exports.

Identifying and measuring service products

Identifying service products, classifying them, collecting data about them and pricing them is more difficult than for goods. The physical attributes of goods make it relatively easy to identify them, to collect data about them, and to classify them using economic attributes of analytical interest such as which industry produces them or which markets they serve. Identifying service products presents a completely different challenge. Service products have to be identified by virtue of the fact that they are transactions. Though it may be possible to measure the number of transactions, it is first necessary to define the service supplied. Three types of service products can be identified. Simple services, composite services and service bundles. A simple service is a standard uniformly priced service, supplied repetitively, whose prices can be readily collected and whose real output can often be measured in simple physical counts e.g. a basic phone service, a simple haircut etc. A composite service is a product that embodies several different, distinct services that are produced and supplied together. The customer is not free to pick or choose among the several services in the composite. The composite service will include services that may also be available as simple services. For example the recreational services of a swimming pool or ski hill may be provided directly as a simple service or form part of a composite hotel accommodation service where the service is automatically provided with the purchase of

accommodation and the price of the service is included in the price of the composite service. A service bundle is a product containing a collection of services negotiated between the service provider and the customer and may, therefore, vary from one customer to the next. Whereas some services can be measured in terms of numbers of uniformly priced services, others can only be measured in terms of numbers of uniquely priced contracts. Each contract may consist of a unique bundle of services specially designed for the customer. Though it is also characteristic of goods that a good may be uniquely produced to customer specifications and be specially priced, the nature of services makes the phenomenon, more frequent in services than in goods.

The four modes of supply in GATS.

The GATS categorizes international trade in services as taking place through four modes of supply: cross border supply-the service is mailed, electronically transmitted or otherwise transported across the border; consumption abroad-the consumer travels across a national border to consume a service; commercial presence-a service provider through an investment establishes a foreign based corporation, joint venture, partnership or other establishment to supply services to foreign persons; and the presence of natural persons-when an individual either alone or as an employee of a service provider travels to another country to deliver a service. All these modes of supply are the subject of national commitments in GATS and need to be statistically measured.

Though it is, in principle, possible to set up programs to measure international trade in services in greater detail, it is not always possible to compile data for the separate modes of delivery. Many services, such as those of professionals, will be delivered both by mode 1 (cross border supply) and mode 4 (the presence of natural persons) and it may not be possible to distinguish how much of the service is delivered by each mode.

With respect to mode 3 (commercial presence), two types of information are of interest. One is the amount of investment in foreign affiliates and the other is information on the amount of each service product delivered through foreign affiliates (coded on the same basis as other internationally traded products). It is to the head office of the global enterprise located in the domestic economy, that the statistical agency turns, to obtain the information. At that level, the business is able to provide investment and other financial information about its affiliates (business units) and the country in which they are located and that is the information that is presently compiled by the US and Canada will likely start to collect. The information that is seldom available is about *products* produced or *individual services* provided by affiliates. The records from which those data can be derived are not likely to be maintained at the level of the head office of the global enterprise. To identify the business unit located abroad and survey it for the individual service products that it provides is as yet difficult to do. Though each country may collect *product* data from businesses located within its domestic boundaries, the confidentiality provisions under

which statistics are collected, make international exchange of those data impossible. In principle, it is possible, to consider the possibility of identifying the affiliates of foreign enterprises located within domestic boundaries and to collect and compile data about their *product* outputs. Hence, it is possible to consider the possibility of compiling *inward* foreign affiliate trade statistics (FATS) in terms of both *investment* and the other characteristics of the affiliates and the *products* that they produce. However with respect to *outward* FATS statistics, the most that can be done, in the immediate future, is to collect industry information, such as total sales, investment and perhaps employment, about foreign affiliates (business units) and to code the unit to the industry classification by its principal activity. It will be some time before it will be possible to compile information about the products that they produce.

Data Collection

The classification and measurement of production and international trade in services, is a more recent addition to the statistical programs of national statistical offices. Given the inherent difficulties of measurement of service transactions as compared to goods, the programs of data collection are as yet relatively new and nowhere as comprehensive or as detailed as for goods. Most agencies have large and well resourced programs to measure production and international trade in goods and to provide the data required to study the performance of goods producing industries such as agriculture, forestry, fishing and mining, manufacturing, construction and the utilities. Also well covered are the services associated with the distribution of goods, namely wholesale and retail trade, transportation and storage.

Now that services account for a majority of output and employment, both international and national statistical agencies have turned their attention to the wide range of service industries that provide business and personal services, and the programs of data collection are growing. In fact, the OECD countries are beginning to collect fairly detailed product data for the production of business services and many countries collect data about tourism. Countries also collect data on international trade in services, in greater or lesser detail, for the Balance of Payments.

Thus there is a growing recognition on the part of national and international statistical offices and the public and private sector consumers of their statistics that more comprehensive and detailed data about service production and international trade needs to be collected. Their ability to do so depends a great deal, upon how businesses maintain their records and the willingness on their part, to provide the detailed data to statistical offices. The private sector can play an important role in recognizing and indicating their interest in improved data on services and in assisting the agencies in their identification of service transactions and collection of the data.

Countries do collect some data on service industries and some have begun to collect data about the production of service products by those industries but whereas national accounts and input-output data about services, statistics on value added and employment in service industries and data about particular service sectors are brought together by the OECD¹² about its members, the amount of international data about the world-wide production of services, whether by industry or by product, remains limited.

The internationally comparable data that are available, are on international trade in services. The IMF publishes annual data¹³ for all countries that provide information to them and the OECD brings together data obtained from its members¹⁴. The WTO produces an Annual Report of International Trade Statistics that draws upon IMF data supplemented by national sources and estimates¹⁵. The Inter-Agency Task Force on Statistics of International Trade in Services is preparing a manual for the UN Statistical Commission, to guide countries in assembling data on international trade in services.

CONCLUSION

As mentioned above, the two international initiatives of (1) preparing and implementing the Central Product Classification and (2) using the CPC in the context of making commitments for GATS, are independent, but mutually supportive activities. They are independent, in that one is for the purpose of compiling statistics and the other for the purpose of legal agreements. When statistical classifications are utilized for purposes other than statistical comparability, such as when they are utilized for legal purposes, the agency responsible for preparing the text is fully responsible for its interpretation. Both initiatives, however, require a detailed description of the services that are included or excluded in each category of service product. The two international initiatives are mutually supportive, because when the classifications and legal agreements use harmonized language and concepts to describe the content of products, they assist in establishing standards for the description of goods and services in policy formulation and in data collection. Individually and collectively, statisticians, policy analysts, and planners and marketers in the private sector can carry out their responsibilities more effectively, if they have available and can use, up-to-date and harmonized information on the subject.

In so far as CPC v.1 is an improvement over the Provisional CPC, it is in the interests of

¹²OECD (1997), *Services Statistics on Value Added and Employment*, OECD, Paris

¹³IMF, *Balance of Payments Statistics, Yearbook*. International Monetary Fund, Washington, D.C.

¹⁴OECD/Eurostat (1998), *Services Statistics on International Transactions*, Paris.

¹⁵WTO (1998), *Annual Report: International Trade Statistics*, World Trade Organization, Geneva.

transparency that CPC v.1 be used to update the MTN GNS/W/120 sectoral list. It is in the interests of trade negotiators and private industry that there be as much clarity as possible with respect to their commitments. They also need to be able to statistically monitor the consequence of decisions reached. Use of an international reference classification, CPC v.1 to update the W/120 list by using the classes as defined, will increase the likelihood of being able to do so. It is in their interest that the members of WTO move forward with this task. Trade policy officials and private sector firms need to recognize the importance of improved services classification in the context of GATS and to work cooperatively to move this work forward.

The potential advantages in using the definitions of international statistical classifications in the context of the GATS have been mentioned above. The main limitation in using a statistical classification such as the CPC for legal purposes lies in the inherent complexity of trying to identify and define services as compared to goods, and the difficulty of being able to identify exhaustive lists of the services in existence at a period in time. Though it is too early in the development of service classifications for the CPC to be composed of an exhaustive list of precisely defined service products, it is a comprehensive classification of services and does provide a basis for defining commitments to the extent that it did so in its provisional form when it was used as the basis for the MTN. GNS/W/120 list.

For the compilation of data on services products CPC v.1 and the BOP classifications exist and are being linked and in time both will need to be further developed, updated and revised. The more exhaustive is the list of services classified in the CPC, and the more it reflects commercial reality and actual transactions, the more useful it will be both for statistical and other purposes. It should be incumbent upon the concerned agencies to increase the effort put into improving, updating and maintaining the CPC, a task that should be done in cooperation with private industry. It is also necessary to augment the degree of coordination and harmonization among related classifications, for which the United Nations Expert Group on Economic and Social Classifications is the forum that should be used.

All countries need to expand their services statistical programs and assemble comparable detailed data about both domestic production and international trade in services, (in the four modes of delivery as defined by the WTO, where possible), and to bring them together in terms of products, and the industries engaged in their production and international trade, using the international reference classifications. Product data, whether about domestic production or the production of foreign affiliates, are required to study markets, market demand, market penetration and import competition. Industry data are required to analyze industrial performance, investment, productivity and competitiveness. The data are useful and necessary both for private industry, and economic and policy analysts. Statistical agencies need the resources and the co-operation of private industry to develop them.

The area of services statistics remains one in which a co-ordinated program designed to bring together world-wide internationally comparable data, on services production (and international trade), initiated or coordinated by the concerned international agencies, needs gradually to be expanded.

APPENDIX A

SERVICES SECTORAL CLASSIFICATION LIST

(MTN.GNS/W/120, 10 July 1991)

Note by the Secretariat

The secretariat indicated in its informal note containing the draft classification list (24 May 1991) that it would prepare a revised version based on comments from participants. The attached list incorporates, to the extent possible, such comments. It could, of course, be subject to further modification in the light of developments in the services negotiations and ongoing work elsewhere.

SECTORS AND SUB-SECTORS**CORRESPONDING CPC
(PROVISIONAL)**

1. BUSINESS SERVICES	Section B
A. <u>Professional Services</u>	
a. Legal Services	861
b. Accounting, auditing and bookkeeping services	862
c. Taxation Services	863
d. Architectural services	8671
e. Engineering services	8672
f. Integrated engineering services	8673
g. Urban planning and landscape architectural services	8674
h. Medical and dental services	9312
i. Veterinary services	932
j. Services provided by midwives, nurses, physiotherapists and para-medical personnel	93191
k. Other	
B. <u>Computer and Related Services</u>	
a. Consultancy services related to the installation of computer hardware	841
b. Software implementation services	842
c. Data processing services	843
d. Data base services	844
e. Other	845+849
C. <u>Research and Development Services</u>	
a. R&D services on natural sciences	851
b. R&D services on social sciences and humanities	852
c. Interdisciplinary R&D services	853
D. <u>Real Estate Services</u>	
a. Involving own or leased property	821
b. On a fee or contract basis	822
E. <u>Rental/Leasing Services without Operators</u>	
a. Relating to ships	83103
b. Relating to aircraft	83104
c. Relating to other transport equipment	83101+83102+83105
d. Relating to other machinery and equipment	83106-83109
e. Other	832
F. <u>Other Business Services</u>	
a. Advertising services	871
b. Market research and public opinion polling services	864
c. Management consulting service	865
d. Services related to man. consulting	866
e. Technical testing and analysis serv.	8676
f. Services incidental to agriculture, hunting and forestry	881
g. Services incidental to fishing	882
h. Services incidental to mining	883+5115
i. Services incidental to manufacturing	884+885(except for 88442)
j. Services incidental to energy distribution	887
k. Placement and supply services of Personnel	872
l. Investigation and security	873
m. Related scientific and technical consulting services	8675
n. Maintenance and repair of equipment (not including maritime vessels, aircraft)	633+

or other transport equipment)	8861-8866
o. Building-cleaning services	874
p. Photographic services	875
q. Packaging services	876
r. Printing, publishing	88442
s. Convention services	87909*
t. Other	8790
2. COMMUNICATION SERVICES	
A. <u>Postal services</u>	7511
B. <u>Courier services</u>	7512
C. <u>Telecommunication services</u>	
a. Voice telephone services	7521
b. Packet-switched data transmission services	7523**
c. Circuit-switched data transmission services	7523**
d. Telex services	7523**
e. Telegraph services	7522
f. Facsimile services	7521**+7529**
g. Private leased circuit services	7522**+7823
h. Electronic mail	7523**
i. Voice mail	7523**
j. On-line information and data base retrieval	7523**
k. electronic data interchange (EDI)	7523**
l. enhanced/value-added facsimile services, incl. store & forward, store & retrieve)	7523**
m. code and protocol conversion	n.a.
n. on-line information and/or dataprocessing (incl. transaction lprocessing)	843**
o. other.	
D. <u>Audiovisual services</u>	
a. Motion picture and video tape production and distribution services	9611
b. Motion picture projection service	9612
c. Radio and television services	9613
d. Radio and television transmission services	7524
e. Sound recording	n.a.
f. Other	
E. <u>Other</u>	
3. CONSTRUCTION AND RELATED ENGINEERING SERVICES	
A. <u>General construction work for buildings</u>	512
B. <u>General construction work for civil engineering</u>	513
S <u>Installation and assembly work</u>	514+516
S <u>Building completion and finishing work</u>	517
S <u>Other</u>	511+515+518

The (*) indicates that the service specified is a component of a more aggregated CPC item specified elsewhere in this classification list.

The (**) indicates that the service specified constitutes only a part of the total range of activities covered by the CPC concordance (e.g. voice mail is only a component of CPC item 7523).

4. DISTRIBUTION SERVICES

S	<u>Commission agents' services</u>	621
S	<u>Wholesale trade services</u>	622
S	<u>Retailing services</u>	631+632
		6111+6113+6121
S	<u>Franchising</u>	8929

E. Other

5. EDUCATIONAL SERVICES

A.	<u>Primary education services</u>	921
B.	<u>Secondary education services</u>	922
C.	<u>Higher education services</u>	923
D.	<u>Adult education</u>	924
E.	<u>Other education services</u>	929

6. ENVIRONMENTAL SERVICES

S	<u>Sewage services</u>	9401
S	<u>Refuse disposal services</u>	9402
S	<u>Sanitation and similar services</u>	9403
S	<u>Other</u>	

7. FINANCIAL SERVICES

S	<u>All insurance and insurance-related services</u>	812**
a.	Life, accident and health insurance services	8121
b.	Non-life insurance services	8129
c.	Reinsurance and retrocession	81299*
d.	Services auxiliary to insurance (including brokering and agency services)	8140
S	<u>Banking and other financial services</u> (excl. insurance)	
a.	Acceptance of deposits and other repayable funds from the public	81115-81119
b.	Lending of all types, incl., inter alia, consumer credit, mortgage credit, factoring and financing of commercial transaction	8113
c.	Financial leasing	8112
d.	All payment and money transmission services	81339**
e.	Guarantees and commitments	81199**
f.	Trading for own account or for account of customers, whether on an exchange, in an over-the-counter market or otherwise, the following:	
-	money market instruments (cheques, bills, certificate of deposits, etc.)	81339**
-	foreign exchange	81333
-	derivative products incl., but not limited to futures and options	81339**
-	exchange rate and interest rate instruments, including	81339**
-	products such as swaps, forward rate agreements, etc.	
-	transferable securities	81321*
-	other negotiable instruments and financial assets, including bullion	81339**
g.	Participation in issues of all kinds of securities, including under-writing and placement as agent (whether publicly or privately) and provision of service related to such issues	8132
h.	Money brokering	81339**
i.	Asset management, such as cash or portfolio management, all forms of collective investment management, pension fund management, custodial depository and trust services	8119+**
j.	Settlement and clearing services for financial assets, incl. securities, derivative	81323*
	products, and other negotiable instruments	81339**or 81319**

k.	Advisory and other auxiliary financial services on all the activities listed in 8131 or Article 1B of MTN.TNC/W/50, incl. credit reference and analysis, investment and portfolio research and advice, advice on acquisitions and on corporate restructuring and strategy	8133
l.	Provision and transfer of financial information, and financial data processing and related software by providers of other financial services	8131
S	<u>Other</u>	
8.	HEALTH RELATED AND SOCIAL SERVICES (other than those listed under 1.A.h-j.)	
S	<u>Hospital services</u>	9311
S	<u>Other Human Health Services</u>	9319
		(other than 93191)
C.	<u>Social Services</u>	933
D.	<u>Other</u>	
9.	TOURISM AND TRAVEL RELATED SERVICES	
A.	<u>Hotels and restaurants (incl. catering)</u>	641-643
B.	<u>Travel agencies and tour operators services</u>	7471
C.	<u>Tourist guides services</u>	7472
D.	<u>Other</u>	
10.	RECREATIONAL, CULTURAL AND SPORTING SERVICES (other than audiovisual services)	
A.	<u>Entertainment services</u> (including theatre, live bands and circus services)	9619
B.	<u>News agency services</u>	962
C.	<u>Libraries, archives, museums and other cultural services</u>	963
D.	<u>Sporting and other recreational services</u>	964
E.	<u>Other</u>	
11.	TRANSPORT SERVICES	
A.	<u>Maritime Transport Services</u>	
a.	Passenger transportation	7211
b.	Freight transportation	7212
c.	Rental of vessels with crew	7213
d.	Maintenance and repair of vessels	8868**
e.	Pushing and towing services	7214
f.	Supporting services for maritime transport	745**
B.	<u>Internal Waterways Transport</u>	
a.	Passenger transportation	7221
b.	Freight transportation	7222
c.	Rental of vessels with crew	7223
d.	Maintenance and repair of vessels	8868**
e.	Pushing and towing services	7224
f.	Supporting services for internal waterway transport	745**
C.	<u>Air Transport Services</u>	
a.	Passenger transportation	731
b.	Freight transportation	732
c.	Rental of aircraft with crew	734
d.	Maintenance and repair of aircraft	8868**
e.	Supporting services for air transport	746
D.	<u>Space Transport</u>	733
E.	<u>Rail Transport Services</u>	
a.	Passenger transportation	7111
b.	Freight transportation	7112
c.	Pushing and towing services	7113

d.	Maintenance and repair of rail transport equipment	8868**
e.	Supporting services for rail transport services	743
F.	<u>Road Transport Services</u>	
a.	Passenger transportation	7121+7122
b.	Freight transportation	7123
c.	Rental of commercial vehicles with operator	7124
d.	Maintenance and repair of road transport equipment	6112+8867
e.	Supporting services for road transport services	744
G.	<u>Pipeline Transport</u>	
a.	Transportation of fuels	7131
b.	Transportation of other goods	7139
H.	<u>Services auxiliary to all modes of transport</u>	
a.	Cargo-handling services	741
b.	Storage and warehouse services	742
c.	Freight transport agency services	748
d.	Other	749
I.	<u>Other Transport Services</u>	
12.	OTHER SERVICES NOT INCLUDED ELSEWHERE	95+97+98+99